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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/776,801	02/05/2001	David A. Morgenstern	MTC 6770	8455

321 7590 05/31/2002

SENNIGER POWERS LEAVITT AND ROEDEL
ONE METROPOLITAN SQUARE
16TH FLOOR
ST LOUIS, MO 63102

EXAMINER	
SMALL, ANDREA D SOUZA	

ART UNIT	PAPER NUMBER
1626	

DATE MAILED: 05/31/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/776,801	Applicant(s) MORGENSTERN ET AL.
	Examiner Andrea D Small	Art Unit 1626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 November 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *79 and 81-101* is/are pending in the application.

4a) Of the above claim(s) *82-101* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *79 and 81* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Applicant's Response

(1) Applicant's response of 11/19/01 has been received and entered as paper no. 6.

(2) Applicants have cancelled claims 64-70, 72-77 and 80.

(3) Election/Restriction: In response to the election/restriction of paper no. 4, Applicants have elected to prosecute Group II, claims 79-81 without traverse.

(4) Amendments:

Rejection under 35 USC 112, 2nd paragraph: Applicants have amended claims 79.

The amendment of claim 79 to delete the phrase "combining" to "contacting" has not overcome the rejection as to that phrase. The term "contacting" still renders the claim indefinite, as it is unclear to one of ordinary skill in the art whether Applicant intends for the two reactants to be placed next to each other or in fact for each to be reacted with each other and form a new product. Amending the term "contacting" and replacing said term with "reacting" is suggested to obviate the rejection.

The amendment to limit the metal containing catalyst to palladium or platinum has also overcome the rejection as applied to the phrase "metal-containing catalyst".

The argument as to the term "any non-reactive solvent" is not persuasive and the rejection of said phrase is maintained as being indefinite for the reasons indicated below.

(5) Claims pending: claims 79 and 81-111 are pending in the instant application. Claim 80 is cancelled. Claims 82-111 are withdrawn from consideration as being drawn to non-elected inventions. 37 CFR 1.142(b). Claims 79 and 81 are examined herein.

Rejections

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 79 and 81 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Transitional phrases: See MPEP 2111.03:

There are 3 types of transitional phrases:

(a) Comprising: "comprising" is synonymous with "including" and is inclusive or open-ended and does not exclude additional, unrecited elements or method steps.

(b) Consisting of: excludes any element, step, or ingredient not specified in the claim.

(c) Consisting essentially of: limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. For the purposes of searching for and applying prior art under 35 USC 102 and 103, absent a clear indication in the specification of claims of what the basic and novel characteristics actually are "consisting essentially of" will be construed as equivalent to "comprising". If the applicant contends that additional steps or materials in the prior art are excluded by the recitation of "consisting essentially of," applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant's invention.

The term "comprising" in the second line of claim 79 includes steps (a) reacting ketone with monoethanolamine and hydrogen, (b)in the presence of a catalyst and (c) essentially in the absence of any non-reactive solvent. The comprising language does not exclude any additional, unrecited elements or method steps, for example, step (d) addition of a solvent, an alcohol, to the reaction. The claim also recites the phrase "essentially", which as indicated above is treated as open language absent a showing that the presence or absence of the component would materially change the characteristics of applicant's invention. Claim 79 is in conflict with itself. The term comprising is inclusive of non-claimed elements, such as exemplified step (d), and the term "essentially" attempts to limit the metes and bounds of the comprising language, by excluding an element or step in the process. The specification is silent as to what are the basic and novel characteristics of the claimed invention and how the inclusion or exclusion of solvent materially affects the basic and novel characteristics of said invention. Therefore, the claim is indefinite because one of ordinary skill in the art would not know if the claimed element (c) is part of the claim or whether the exemplified element (d) may be included in the contemplated invention.

The phrase " any non-reactive solvent" renders the claim indefinite. The specification defines said solvent as ethanol or any other non-reactive solvent. A solvent is defined as "The component of a solution that is present in excess or that undergoes no change of state." By that definition, any non-reactive solvent is any solvent. The term is not defined in the specification in such a way as to provide one of ordinary skill in the art with the requisite metes and bounds of Applicant's invention. There are numerous solvents in the chemical arts and each solvent may be used in a variety of processes. The single exemplification of ethanol does not provide any standard for ascertaining the Applicant's contemplated solvent. The specific characteristic of the

See dictionary definition attached.

solvent that may be or may not be used in the instantly claimed reaction is unknown. Therefore, the phrase is indefinite as it is unclear to one of ordinary skill in the art what applicant is including or excluding from their claim.

The term "essentially" renders the claim indefinite because it is unclear whether the Applicant intends to claim a reaction where no solvent is employed or a reaction where a nominal amount of solvent is used.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 79 and 81 are rejected under 35 U.S.C. 102(b) as being anticipated by Cope, et al.

Applicants claim method of preparing N-substituted monoethanolamine comprising (a) reacting ketone with monoethanolamine and hydrogen, (b) in the presence of a catalyst and (c) essentially in the absence of any non-reactive solvent.

Cope teaches the preparation of N-substituted ethanolamines comprising the steps of (a) reacting ketone (methyl hexyl ketone) with monoethanolamine and hydrogen, (b) in the presence of a catalyst (platinum catalyst) and (c) in the presence of a solvent, 100 cc of alcohol. See page 1505, col. 1, also see table I, page 1504specific examples of reactants. If Applicant's intend the reaction steps to be open-ended, i.e. comprising, then the reference anticipates the instant claims.

If applicant intends the reaction steps to exclude the presence of a solvent, the reference still anticipates the instant claims as written because of the use of "essentially" reads on an amount >0.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 79 and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cope, et al.

Applicants claim method of preparing N-substituted monoethanolamine comprising (a) reacting ketone with monoethanolamine and hydrogen, (b) in the presence of a catalyst and (c) essentially in the absence of any non-reactive solvent

Determination of the scope and content of the prior art (MPEP §2141.01)

Cope teaches the preparation of N-substituted ethanolamines comprising the steps of (a) reacting ketone (methyl hexyl ketone **also** ketones generally see page 1505, col. 2) with monoethanolamine and hydrogen, (b) in the presence of a catalyst (platinum catalyst) and (c) in the presence of a solvent, 100 cc of alcohol. See page 1505, col. 1, see also table I, page 1504 for specific reactants.

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02)

The difference between the prior art and the instant claims, if any, is that
(a) the instant claims are silent as to the type of solvent encompassed therein, or
(b) the prior art does not specifically teach that a solvent may not be used in the instant reaction.

Finding of prima facie obviousness---rational and motivation (MPEP §2142-2413)

However, it would be prima facie obvious for one of ordinary skill in the art at the time of the filing of the instant application to
(a) substitute one solvent for another, since the solvent itself is unreactive and the reference exemplifies the use of different solvents in the reaction, eg. alcohol (page 1505, col. 1) and benzene (page 1505, col. 2), or
(b) not employ a solvent in the reaction, as by definition a solvent is non-reactive, and to reduce the number of steps in the overall reaction by eliminating additional steps needed to remove the solvent from the reaction, such as distillation or filtration, and thus increase efficiency of the overall process.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrea D. Small, whose telephone number is (703) 305-0811. The examiner can normally be reached on Monday-Thursday from 8:30 AM - 7:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Joseph K. McKane, can be reached at (703) 308-4537. The Unofficial fax phone number for this Group is (703) 308-7921. The Official fax phone numbers for this Group are (703) 308-4556 or 305-3592.

When filing a FAX in Technology Center 1600, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communications with the PTO that are not for entry into the file of the application. This will expedite processing of your papers.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [Joseph.McKane@uspto.gov]. All Internet e-mail communications will be made of record in the application file. PTO employees will not communicate with applicant via Internet e-mail where sensitive data will be exchanged or where there exists a possibility that sensitive data could be identified unless there is of record an express waiver of the confidentiality requirements under 35 U.S.C. 122 by the applicant. See the Interim Internet Usage Policy published by the Patent and Trademark Office Official Gazette on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, whose telephone number is (703) 308-1234

Andrea D. Small
May 28, 2002

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